

ABSTRACT OF THE DISCLOSURE

A system, device, and method for managing service level agreements in an optical communication system uses an optical service agent to manage a service level agreement (SLA) for a user. The optical service agent can perform both real-time and off-line analysis for the user, and can interact with various network elements (including the core optical communication network) to handle billing, penalty, and other issues associated with a SLA breach. Among other things, the optical service agent may monitor and analyze a connection in real-time for determining SLA compliance, gather and maintain statistical information relating to a connection, analyze the statistical information off-line for determining SLA compliance, patterns, and trends, interact with a service provider to enforce penalty provisions in the SLA, interact with a service provider to negotiate a credit for services not provided by the service provider in accordance with the SLA, interact with a service provider to negotiate "replacement" services for a breach of the SLA, interact with various network elements to rectify a breach of the SLA, interact with the service provider to dynamically modify the SLA based upon changing user requirements, and interface with a billing/accounting system to provide SLA-related information.